



2018 CORRIDOR MONITORING AND TRIGGERING REPORT

August 2019



WILMAPCO

DelDOT
Delaware Department of Transportation



DART
Moving Forward

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CONTACTS

Wilmington Area Planning Council
Dan Blevins
850 Library Avenue, Suite 100
Newark, Delaware 19711
dblevins@wilmapco.org

New Castle County
Owen Robatino
87 Reads Way
New Castle, Delaware 19720
ocrobatino@newcastlede.gov

Delaware Department of Transportation
Breanna Kovach, PE
800 Bay Road
Dover, Delaware 19901
breanna.kovach@delaware.gov

Delaware Transit Corporation
Jared Kauffman
119 Lower Beech Street, Suite 100
Wilmington, Delaware 19805-4440
jared.kauffman@delaware.gov

INTRODUCTION

The Route 40 Corridor Improvements Project was initiated by the Delaware Department of Transportation in partnership with New Castle County and WILMAPCO in September 1998. Completion of the first four steps of this project produced a community-supported 20-year transportation plan prepared under the direction of a Steering Committee composed of civic leaders, elected officials, and business interests. Technical support for plan development was provided by a project team, composed of the project partners' staffs and their planning and engineering consultants. The Route 40 Corridor 20-Year Transportation Plan (the Plan) was adopted on June 19, 2000.

The Plan addresses the conditions that are expected to result from projected growth in housing, employment, and traffic over 20 years. The Plan contains projects, separated into three phases (Phase I 2000-2007, Phase II 2008-2013, Phase III 2014-2020), that address projected transportation problems. By phasing projects over 20 years and using a monitoring and triggering mechanism, projects will be built only as conditions dictate, addressing one of the main goals of the Steering Committee.

The fifth and final step of the project, the implementation of the Plan recommendations, is now in its seventeenth year. This eighteenth annual Corridor Monitoring and Triggering Report is an essential component of this step. To assure that all projects in the Plan are implemented as conditions dictate—neither prior to the anticipated need, nor subject to unnecessary delay after need is identified—the Plan included an implementation strategy consisting of five components:

- Corridor preservation
- Monitoring
- Triggering
- Citizen involvement
- Project implementation

Citizen involvement is accomplished through a Corridor Monitoring Committee (CMC). Until 2008, this committee typically met three or four times each year with the project team to review conditions in the corridor. The CMC met once in May 2018.

The monitoring efforts, which are summarized in this report, consider:

- Land development
- Traffic
- Corridor preservation
- Highway safety
- Transit service

- Project status
- Impact of completed projects
- Other projects in the region

Each of these factors is discussed in the following sections. The project team's assessment of these monitored conditions forms the basis for the triggering section of the report. Examples of triggering, as defined in the Plan, are listed below.

- Major land development activity would trigger immediate review of transportation needs: level of service implications and strategy, transit service needs or opportunities, safety concerns, and pedestrian and bicycle needs.
- Steady deterioration in level of service to D or worse would trigger a response in the form of strategies to stabilize/reduce demand (i.e. travel demand management measures or transit improvements) or increase multimodal capacity.
- Safety improvements recommended by the Hazard Elimination Program (HEP), a component of the Highway Safety Improvement Program, would trigger an evaluation by the project team of the compatibility of the proposed improvements with the Plan and of the need to make adjustments to the Plan.
- Transit service changes proposed by DTC would trigger an evaluation by the project team of any ancillary improvements needed to complement the service changes, such as sidewalks or shelters that should be advanced in the Plan's implementation.
- Transportation improvements that are not part of the Plan but that impact the corridor and are proposed for implementation would trigger an evaluation by the project team. The evaluation would focus on compatibility of the proposed improvements with the Plan and the need to make adjustments to the Plan.

Assessment of these potential changes may trigger one of the following options to best respond to the new conditions:

- Continue with a Plan project or projects as currently scheduled in the WILMAPCO Transportation Improvement Program (TIP) and/or DelDOT Capital Transportation Program (CTP).
- Move a project(s) forward in the TIP/CTP schedule and determine appropriate level of effort for design activities.
- Move a project(s) back into the out years of the TIP/CTP schedule.

MONITORING

Land Development

Development activity is monitored through meetings of the Subdivisions review team, which consists of representatives from DelDOT, the New Castle County Department of Land Use, and the Delaware Transit Corporation. Additionally, New Castle County reviews development plans for compliance with the Unified Development Code (UDC), including transportation aspects. If a major development plan is submitted in the corridor, the Route 40 Project Team may review plans for consistency with and impact to the Plan and provide comments to DelDOT and New Castle County.

Summary of Development Activity

During 2018, there were 22 new development plans (3 major/rezonings, 11 minor, and 8 resubdivision/other) submitted to New Castle County for review in the Route 40 corridor. This level of development activity is more than the previous year. Table 1 provides a description and status of the current major development proposals, as well as other previously-submitted major plans discussed during the year. Major development locations are shown in Figure 1.

Review of eight major developments proposed before 2018 continued this year. Among those plans, one (Glasgow Avenue/Commons) was recorded during 2018. Among the remaining seven plans, two are in the record plan submittal stage and five are in the exploratory submittal plan review stage.

Table 1. Major Development Plans/Rezonings Received and/or Reviewed During 2018

Site	Description	Remarks	New plan in 2018?
Glasgow Avenue Commons	Proposed commercial and office development at the southwest corner of US 40 and SR 896	Recorded	No
Vista at Red Lion Section One	Rezone from S to ST to construct 286 age restricted townhouse units on 56.71 acres	Record Submittal	No
Vista at Red Lion Section Two	Rezone from S to ST to construct 289 single family units on 144.88 acres	Record Submittal	No
La Grange Plaza	Rezone property to construct a 6,560 SF restaurant and 11,300 SF office/retail building on 5.25 acres	Exploratory Submittal	No
The Cascades	Construct an open spaced planned community consisting of 18 single family detached lots, 64 village lots, and 33 lot line lots	Exploratory Submittal	No
The Village at Pine View	Develop property into an open space planned development consisting of 175 attached and detached single family lots	Exploratory Submittal	No
Village of Canterbury	Construct three, three-story apartment buildings with eight units per building and replace 19 parking spots lost by garage construction	Exploratory Submittal	No
613 Pulaski Highway	Combine three tax parcels to develop property as a convenience store and associated improvements	Exploratory Submittal	No
Village at LaGrange	Rezone from S to ST and construct 140 apartment units, 158 manor house apartments units, and a mixed-use development consisting of 66,300 SF retail, expand existing storage building for use as a restaurant, and retain existing historic dwelling for office use.	Exploratory Submittal	Yes
Whitewood Village Addition	Construct a 35-townhome subdivision.	Exploratory Submittal	Yes
LaGrange 10 Acre Commercial	Rezone from S to CR to extinguish parcel created for future pump station construction and cross access easement and construct a 38,579 SF retail space with associated improvements.	Exploratory Submittal	Yes

Figure 1. Active Major Development Plans/Rezonings



- | | |
|----------------------------------|---------------------------------|
| 1. Vista at Red Lion Section One | 7. The Village at Pine View |
| 2. Vista at Red Lion Section Two | 8. 613 Pulaski Highway |
| 3. La Grange Plaza | 9. Village at LaGrange |
| 4. The Cascades | 10. Whitewood Village Addition |
| 5. Glasgow Avenue/Commons | 11. LaGrange 10 Acre Commercial |
| 6. Village of Canterbury | |

Developer Agreements

Since 2000, there have been more than 500 applications submitted to New Castle County for developments in the Route 40 Corridor. In addition to those previously noted, many development projects in the corridor have developer agreements with the State or County regarding transportation improvements in the corridor. These improvements range from sidewalks to widening of roadways, signal agreements and significant right-of-way dedication. New Castle County continues to work with DelDOT on a comprehensive tracking system for these agreements, which is used to coordinate private and DelDOT-sponsored roadway improvements. Developer contributions throughout the corridor are highlighted in Figure 2.

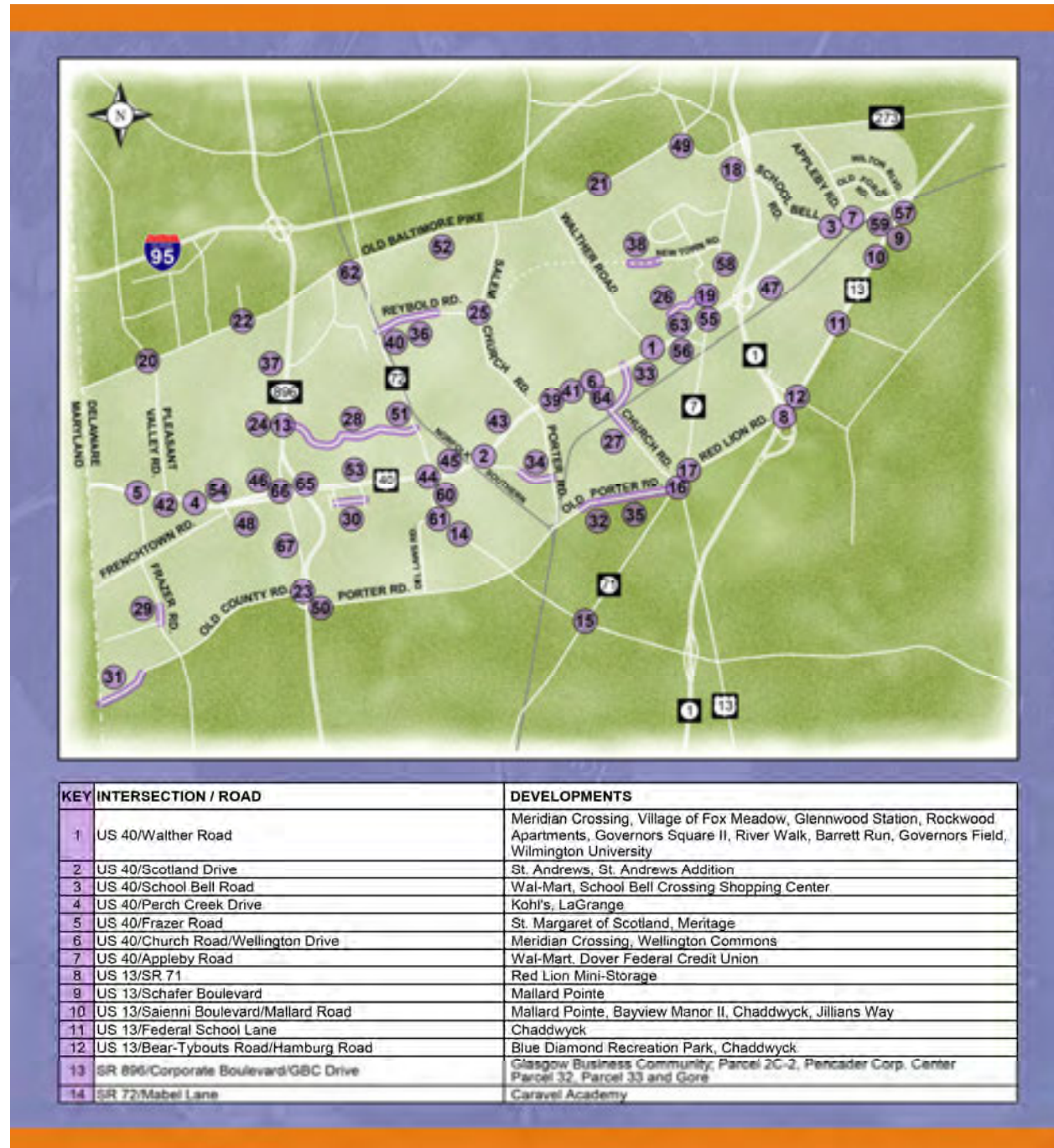
Any proposed development requiring a Level of Service (LOS) waiver from New Castle County must first have a Traffic Mitigation (TM) Agreement negotiated with DelDOT. TM Agreements were implemented to provide an alternative for developers to reduce trip generation and provide transportation demand management measures. Developers are required to present primary and contingent trip reduction measures that could include alternative work hours, preferential parking for carpools/vanpools, transit usage, bicycle storage, and parking management. There are four developments in the Route 40 Corridor that have TM Agreements with DelDOT: Lincoln Center, Springside Plaza, Astra Zeneca, and Gore.

TIS Waivers / Fair Share Contributions

In 2004, New Castle County amended its Unified Development Code (UDC) to increase eligibility for Traffic Impact Study (TIS) Waivers. The UDC already enabled such waivers for developments where TISs had been done for changes in zoning. The modification allowed TIS Waivers for developments in Transportation Improvement Districts (TIDs) or similarly defined areas where sufficient prior traffic studies have been done. There are currently three operating TIDs in Delaware: Southern New Castle County, Westown in Middletown, and US 13 in Dover. The State is currently working with Sussex County on the development of the Henlopen TID and Southeast Milford TID and there are several additional TIDs under consideration in the Kent County Comprehensive Plan. A TIS Waiver involving a TID is based on the traffic analysis done for the TID and its planned transportation improvements, rather than a TIS, to determine what transportation improvements should be the developer's responsibility. The developer may still be required to perform a Traffic Operational Analysis (TOA) to demonstrate DelDOT and County Level of Service (LOS) concurrency.

Within the Route 40 Corridor, 26 development plans have requested TIS Waivers for locations in a TID. By the end of 2018, TIS Waivers had been approved for 20 of them. Two developments did not require a TIS: Reserve at Becks Pond involved workforce housing, which is exempt from County concurrence; and Lighthouse Baptist Church where the nearby intersection had been recently improved. DelDOT also denied a TIS Waiver for Governors Square Commercial Center and required a TIS for Whitewood Village. Another development, Whittington Woods, completed a TIS instead of completing the waiver process. For Village at Pine View, the applicant is doing a TOA as part of the TIS Waiver process.

Figure 2. Developer Contributions*



*Note: See legend continued on the following page.

Figure 2. Developer Contributions (cont.)

KEY	INTERSECTION / ROAD	DEVELOPMENTS
15	SR 71/SR 72	Willow Oak Farms, Red Lion Chase, Sunset Meadows, Red Lion Christian Academy, Sunset Run, Village of Red Lion Creek, Estates of Red Lion, Jester Crossing, Peoples Industrial Park, WAWA
16	SR 71/Church Road	Meridian Crossing, Rockwood Apartments
17	SR 7/SR 71	Love of Christ Church, Corbitt Estates, Estates of Red Lion, Peoples Industrial Park
18	SR 7/School Bell Road	School Bell Apartments
19	Songsmith Drive/Governors Square access	Calvarese Farms, Governors Square Commercial
20	Old Baltimore Pike/Otts Chapel Road/Pleasant Valley Road	Dearborne Woods, Lighthouse Baptist Church
21	Old Baltimore Pike/Martha Washington Boulevard/Norwegian Woods Drive	Norwegian Woods, Hershberger Apartments
22	Old Baltimore Pike/Iron Hill Road	Preserve at Lafayette Hill
23	Glasgow Avenue/Old County Road	Meritage
24	Corporate Boulevard/Executive Drive	Pencader Corporate Center; Parcel 30A
25	Salem Church Road/Reybold Road	AstraZeneca, Whitewood Village
26	Carvel Drive traffic calming	Calvarese Farms
27	Church Road	Rockwood Apartments, Meridian Crossing
28	GBC Drive (Dusk Run Road), SR 896 to SR 72	Gore
29	Frazer Road	Meritage (frontage shoulder)
30	George Williams Way	YMCA, Delaware State Police, Bristol Place
31	Old County Road	Estates at Long Branch (frontage, extending west to Maryland border)
32	Old Porter Road curve realignment	Meridian Crossing
33	Rockwood Drive	Rockwood Apartments
34	Scotland Drive extension, St. Andrews Road to Porter Road	St. Andrews Addition
35	Old Porter Road	Vista at Red Lion
36	Reybold Road	Whitewood Village
37	Route 896/Old Coochs Bridge Road/Four Seasons Parkway	Thirteen Stars Housing and Gore
38	Newtown Trail	Whittington Woods
39	US 40/Glasgow Drive	Salem Center
40	SR 72/Reybold Road	Whitewood Village
41	US 40/Brookmont Drive	Wellington Commons
42	US 40/Pleasant Valley Road	Pleasant Valley Crossing, Royal Farms
43	US 40/Becks Woods Drive	Becks Woods Plaza, St. Andrews Addition
44	US 40/SR 72	Fox Run Shopping Center, Belltown Business Center
45	US 40/PGA Blvd	Belltown Business Center
46	US 40/Peoples Plaza	LaGrange
47	US 40/Buckley Blvd	Americinn, Goodyear, Gordon Furniture
48	US 40/Biddle Avenue	Springside Plaza
49	Old Baltimore Pike/SR 273	Comfort Suites, Promenade at Christiana
50	SR 896/Porter Road	Gore, Colony at Summit Bridge
51	SR 72/GBC Drive	Gore
52	Old Baltimore Pike/Hanna Drive	Astra Zeneca
53	US 40/LaGrange Avenue/Glasgow Park	YMCA, Delaware State Police, New Castle County
54	US 40/N392A	Deer Park Plaza
55	US 40/SR 7	Governors Square Commercial, Newtown Square
56	SR 7/Glendale Connector/Old Hamburg Road	Governors Square Commercial
57	US 13/Langollen Blvd	Old State Road Hotel, Old State Road Self Storage
58	SR 7/Songsmith Drive South	Governors Square Commercial, Lincoln Center
59	Old State Road	Old State Road Hotel, Old State Road Self Storage
60	SR 72/Rue Madora	Fox Run Business Center
61	SR 72/Del Laws Road	Fox Run Business Center
62	SR 72/Old Baltimore Pike	Royal Farms
63	US 40 Widening	Governors Square II, Wilmington University, Rockwood Apartments
64	Church Road/Rockwood Road	Steeple Glen, Rockwood Apartments
65	US 40/SR 896	Glasgow Commons
66	US 40/Glasgow Avenue	Glasgow Commons
67	Glasgow Avenue/Peoples Plaza	Glasgow Commons

Traffic

To monitor traffic growth, full-day traffic counts were conducted on five segments of Route 40 using automatic tube counters. These segment counts were used to monitor overall trends, as opposed to intersection counts, which were used to measure levels of service. The segment counts were compared with the traffic information utilized during development of the Plan, which was based on counts conducted primarily in 1998 and 1999, as well as counts conducted for Corridor Monitoring and Triggering Reports during 2000 through 2018. Average daily traffic (ADT) volumes along Route 40 are summarized in Table 2.

The Route 40 Plan anticipated that at the five locations shown in Table 2, traffic would increase by an average of about 1.8 percent per year through 2020. Current data indicate growth rates less than what was originally anticipated (See Figure 3). The volumes at these five locations are summarized in Table 2. All of the locations experienced less traffic than predicted, ranging from 13 to 34.5 percent below the 2018 projections. As a result, the general growth trend through 2018 is about 0.7 percent annually.

To compare current levels of service for intersections along US 40 to the levels of service used during the Plan development process, the project team conducted intersection counts during weekday peak hours at twenty-five signalized intersections on US 40 in October and November 2018. Signalized

intersections that were not counted in 2018 contain the same LOS values from 2017 and are denoted by a footnote in Table 3. Unsignalized intersections were not counted because no improvements are included at these intersections in the Plan. It is assumed that any future signalization of these intersections, whether required due to land development or traffic growth, will have to meet intersection signalization warrants as required by DelDOT.

The traffic volumes collected at the signalized intersections were analyzed in a manner consistent with the traffic impact study process used by New Castle County and DelDOT. The results of the level of service (LOS) analysis are summarized in Table 3. As indicated, ten intersections had minor degradation in levels of service from 2017 and seven experienced slight improvements.

- The intersection of US 40 at SR 896 experienced LOS E (55.3 sec) during the PM peak hour. There was a 7.0 second increase in average delay per vehicle when compared to the 2017 analysis. Final design for a grade separation at this intersection is currently underway.

Table 2. Average Daily Traffic

Location	Plan volumes (1998/1999)	2000 counts	2017 counts	Projected 2018 volumes	Actual 2018 volumes	Percentage over/under projected	2020 forecast
East of Perch Creek Drive	34,000	29,000	38,568	46,727	38,444	-17.7%	48,000
West of SR 72	29,000	27,000	32,461	48,091	31,506	-34.5%	50,000
West of Salem Church Road	32,000	34,000	36,915	50,182	37,162	-25.9%	52,000
West of Walther Road	41,000	43,000	43,715	56,455	49,116	-13.0%	58,000
West of Wilton Boulevard	27,000	27,000	25,367	32,455	24,340	-25.0%	33,000

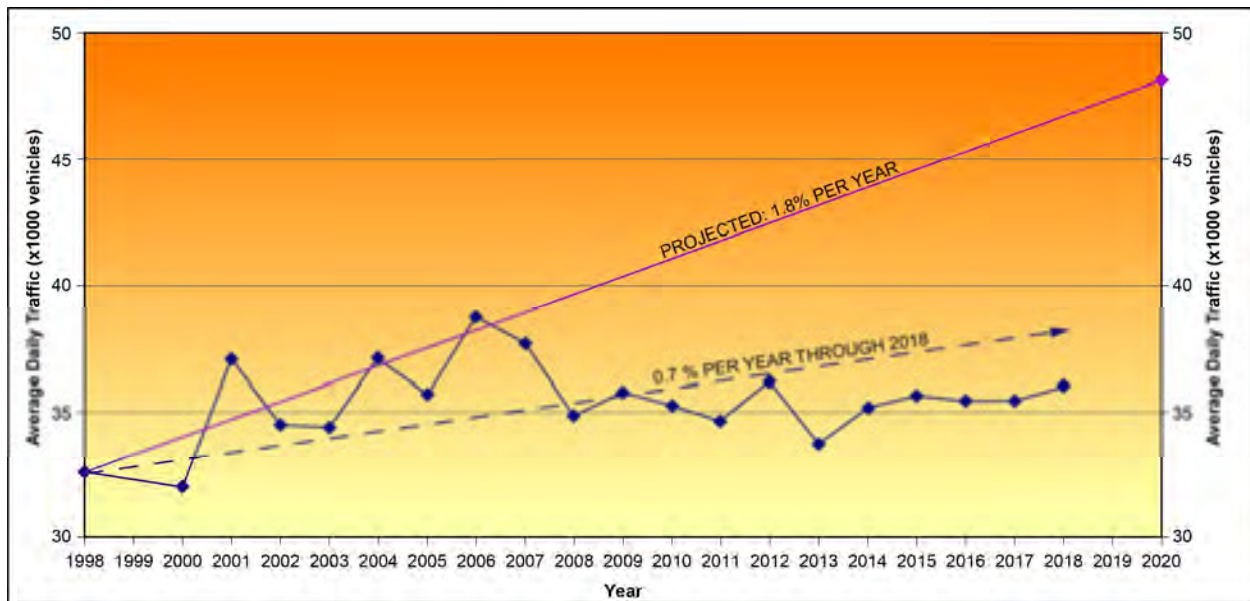
Figure 3. Traffic Growth along US 40 (average of five count locations)

Table 3. Signalized Intersection Level of Service Summary

INTERSECTION	PEAK HOUR LEVEL OF SERVICE									
	Base (1998/1999)		2000		2017		2018		2020 without additional Plan improvements	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Frazer Road	-	-	-	-	B	B	B	Ⓢ	F	C
Pleasant Valley Road ²	C	C	C	C	C	C	Ⓢ	C	E	F
Perch Creek Drive	-	-	B	A	B	B	B	Ⓢ	C	C
Biddle Avenue north ³	-	-	-	-	A	A	A	A	-	-
Biddle Avenue south ³	-	-	-	-	B	C	B	Ⓢ	-	-
Peoples Plaza north	B	C	A	B	A	A	A	A	A	A
Peoples Plaza south	B	B	B	C	B	B	B	B	C	D
Glasgow Avenue north	C	C	C	C	D	D	Ⓢ	D	C	E
Glasgow Avenue south	C	D	B	C	D	C	D	Ⓢ	D	D
SR 896	D	D	D	E	D	D	D	Ⓢ	F	F
LaGrange Avenue	-	-	-	-	B	C	B	C	B	C
SR 72	D	D	E	E	D	E	D	Ⓢ	E	E
Scotland Drive	C	B	B	B	C	B	C	Ⓢ	C	C
Becks Woods Drive ⁴	-	-	-	-	B	B	B	B	-	-
Salem Church/Porter Road	C	C	D	D	C	D	Ⓢ	D	D	F
Glasgow Drive ¹	-	-	-	-	A	B	Ⓢ	B	-	-
Brookmont Drive ⁵	B	B	B	B	B	C	B	Ⓢ	B	B
Church Road ⁵	D	C	D	C	D	C	D	C	C	C
Walther Road	C	D	D	D	C	C	C	C	C	C
Governors Square	B	C	C	C	C	D	C	D	C	D
SR 7/Eden Square	E	D	E	D	C	C	C	C	D	E
SR 1 SB Ramps	A	A	A	A	A	A	A	A	B	C
SR 1 NB Ramps	B	B	B	A	A	B	A	B	E	C
Buckley Boulevard	-	-	B	B	B	C	B	Ⓢ	B	C
School Bell Road	B	B	C	A	B	A	Ⓢ	A	A	A
Wilton Boulevard	B	B	C	C	B	C	B	Ⓢ	B	C
US 13	D	B	C	B	B	C	Ⓢ	Ⓢ	F	F

Note: Red denotes a worse level of service than 2017; green denotes improvement in level of service over 2017.

¹ Traffic signal was installed at US 40 and Glasgow Drive in 2009

² Entrance to Royal Farms (south leg) was completed in 2012

³ Traffic signal was installed at US 40 and Biddle Avenue in 2013

⁴ Traffic signal was installed at US 40 and Becks Woods Drive in 2013

⁵ These intersections were not counted during 2018; results reflect count data from 2017

To assess the validity of the plan beyond its original horizon year of 2020, an analysis of projected 2030 traffic volumes was conducted in 2009. DelDOT's travel demand model was used to forecast traffic along Route 40 and side streets. These future daily volumes were converted to peak hour turning movement forecasts. A level of service analysis was then conducted to determine how well the improvements in the Plan will perform in 2030.

Due to lower than expected traffic growth, most of the improvements proposed in the Plan will not only continue to work in 2020, but will accommodate forecast 2030 traffic as well. Plan improvements at the following locations are expected to be sufficient for 2030 traffic:

- US 13 interchange (to replace an existing signal)
- Wilton Boulevard
- School Bell Road
- Buckley Boulevard
- SR 1 interchange
- SR 7 interchange (to replace existing signals at SR 7, Eden Square, and the Governors Square/Glendale Plaza entrance)
- Walther Road
- Church Road
- Brookmont Drive
- Glasgow Drive
- Scotland Drive
- SR 72
- Lagrange Avenue/Glasgow Park
- SR 896 interchange (to replace an existing signal)
- Peoples Plaza (two intersections)
- Perch Creek Drive

There are some locations where, due to changes in traffic patterns, Plan improvements are not forecast to be sufficient to address anticipated traffic in 2030. These locations include the following.

- **Salem Church Road/Porter Road:** Due to higher side street volumes than originally anticipated in the Plan, Route 40 may need to be widened to four through lanes in each direction, rather than the three noted in the Plan, to maintain level of service D. However, the intersection will barely drop below level of service D with three through lanes in each direction.
- **Glasgow Avenue (two intersections):** Due to higher volumes than originally anticipated in the Plan, Route 40 may need to be widened to three

through lanes in each direction to maintain level of service D. The Aikens Tavern historic district abuts three corners of the intersection, making widening along the existing alignment challenging. Alternative solutions to reduce or accommodate future traffic demand should be considered.

- **Pleasant Valley Road:** Due to higher volumes than originally anticipated in the Plan, as well as the addition of a south leg to the intersection, Route 40 may need to be widened to three through lanes in each direction to maintain level of service D. An additional eastbound left turn lane may also be needed by 2030.
- **Frazer Road:** Due to higher volumes than originally anticipated in the Plan, Route 40 may need to be widened to three eastbound through lanes to maintain level of service D.

Because most of the additional improvements needed by 2030 are in the portion of the corridor west of SR 896, strategies to reduce travel demand should be considered either in addition to or in lieu of roadway widening. Transit could also play an increased role in addressing future traffic congestion challenges in this area.

Highway Safety

Review of Conditions in 2018

Each year, the project team coordinates with DelDOT Traffic Safety to request the annual crash report summary for the Route 40 Corridor. In addition, to reviewing the annual summary, the project team coordinates with DelDOT's statewide Highway Safety Improvement Program (HSIP) to identify any locations that are currently under study. DelDOT's statewide HSIP includes several categories of transportation safety throughout the state. One of those categories is the Hazard Elimination Program (HEP), which involves reviewing statewide crash rates and selecting approximately 15 sites for study. The 2018 HEP list did not include any sites within the Route 40 corridor.

The goal of this report with respect to safety is to identify intersections where reported crash totals from the annual summary increased significantly (>50%) compared to the previous five-year average, identify the possible reasons for those increases, and consider those sites for detailed study and improvement recommendations.

Table 4 shows the number of reported crashes annually at selected intersections from 2013-2018. The 2018 crash totals were compared to the previous

five-year average to determine if there was an increase of greater than 50 percent. It is important to note that these totals are approximated based on raw crash data summaries and not the actual reports. The number of crashes is determined based on the DelDOT mile posts at a particular intersection along US 40 and includes all crashes listed within 0.10 miles of the intersection. These numbers may vary upon review of the detailed crash reports.

Upon reviewing the crash data, there are no intersections where the 2018 reported crash total is more than 50 percent higher than the previous five-year average. However, the reported crash totals at SR 896 (56) and Salem Church Road/Porter Road (51) were the highest totals reported at those locations since the inception of the plan.

After reviewing the crash data at SR 896 and Salem Church Road/Porter Road, any crash patterns identified will be evaluated to determine the need for further study.

Pedestrian and Bicycle Safety

During 2018 in the Route 40 corridor, a total of five reported crashes involved pedestrians and two involved bicyclists. Four of the five reported pedestrian crashes resulted in personal injuries and one resulted in a fatality. The cyclist crashes did not result in injuries and the cyclists were cited for failing to yield the right of way in both reports. The fatal pedestrian crash occurred on April 12, 2018 at about 5:30 AM in dark, unlit conditions. The crash involved an impaired pedestrian walking in the right turn lane for westbound US 40 approaching Appleby Road. Among the remaining pedestrian crashes, two occurred in the crosswalk where the pedestrian failed to obey the traffic signal, one occurred mid-block and one occurred in a right turn lane approaching an intersection.

Route 40 Pedestrian Study

In 2017, DelDOT initiated a pedestrian safety study along Route 40 between SR 72 and Buckley Boulevard. In addition to reviewing detailed crash reports, field observations and pedestrian counts were conducted at several intersections along this 4.3-mile segment in spring 2017. A draft study was submitted to DelDOT for review in 2018 and will be finalized in early 2019.

Previous Safety Studies

Based on the reported crash totals for 2017, detailed crash reports were requested at the intersection of Route 40 and Pleasant Valley Road. A review of the crash reports indicated that among the 27 reported crashes, there were 19 (70%) rear end crashes and seven (26%) angle crashes. Ten of the 19 reported rear end crashes occurred on the southbound Pleasant Valley Road approach. Six of the seven reported angle crashes involved a left-turning and through vehicle along Route 40 and all involved a through vehicle driver disregarding the red light.

Electronic Red Light Safety Program

The Delaware Electronic Red Light Safety Program (ERLSP) began operations on February 1, 2004 at the intersection of Route 13 and Webbs Lane in Dover. The program has now expanded to 46 intersections statewide. Among those intersections there are six located along US 40 as noted below.

- US 40 at SR 896
- US 40 at SR 72
- US 40 at Scotland Drive
- US 40 at Glasgow Drive
- US 40 at Governors Square
- US 40 at Eden Square

Each location is identified based on an extensive selection process that includes reviewing crash data, field observations, signal timing review, data collection, and site evaluation. The program also completes an annual report that provides statistics about reported crashes, violations, and program revenue and expenses.

More details about the history of the program and updates on the progress can be reviewed on the project website at:

https://www.deldot.gov/Programs/red_light/index.shtml

Table 4. Intersection Crash Data Summary

INTERSECTION	NUMBER OF REPORTED CRASHES						
	2013	2014	2015	2016	2017	5-yr average	2018
Frazer Road	6	5	9	16	8	9	6
Pleasant Valley Road	21	17	25	12	27	20	27
Perch Creek Drive ¹	14	11	10	19	16	14	15
Peoples Plaza	10	7	12	13	9	10	6
Glasgow Avenue	33	27	17	21	30	26	32
SR 896	29	30	53	49	31	38	56
LaGrange Avenue	16	11	13	17	13	14	12
SR 72	42	27	51	42	26	38	36
Scotland Drive	26	30	29	23	20	26	21
Becks Woods Drive ³	9	7	6	13	6	8	11
Salem Church/Porter Road	40	27	35	38	33	35	51
Glasgow Drive ²	26	16	10	13	8	15	15
Brookmont Drive	8	17	23	16	19	17	23
Church Road	18	26	29	31	26	26	35
Walther Road	12	20	17	23	17	18	21
SR 7	41	58	49	54	47	50	45
SR 1 SB	8	7	9	13	11	10	17
SR 1 NB	2	6	7	10	10	7	9
Buckley Boulevard	9	8	8	15	8	10	10
School Bell Road	5	5	6	3	5	5	9
Wilton Boulevard	22	9	16	11	17	15	14

¹A fourth leg (north) was constructed in 2010 as part of the LaGrange Development.

²A traffic signal was installed at Route 40 and Glasgow Drive in November 2009.

³A traffic signal was installed at Route 40 and Becks Woods Drive in early 2013.

Transit Service

Comparing transit ridership numbers in 2018 with those from 2017, statewide ridership decreased over four percent while ridership in the US 40 corridor increased less than one percent. In the previous year, statewide ridership decreased over ten percent while ridership in the US 40 corridor decreased eight percent.

Statewide ridership has decreased over eleven percent during the past five years, from 2014 through 2018. Ridership in the Route 40 corridor also decreased over eleven percent during the past five years. Fare increases are one possible reason for the recent reduction in ridership.

Route 40 and route 64 saw decreases in ridership in 2018 while the remaining three routes in the corridor experienced an increase in ridership numbers in 2018. Ridership on bus route 64 decreased nearly 19 percent in 2018 and has decreased over 32 percent since 2014.

Ridership on bus route 40 decreased over three percent in 2018, but has increased over 16 percent since 2014. Ridership on route 55 increased over nine percent in 2018 and has decreased over 26 percent since 2014. Ridership on bus route 42 increased over seven percent in 2018 and has decreased over 19 percent since 2014. Route 54 increased over nine percent in 2018 and has decreased nearly 24 percent since 2014. See Figure 4 for route locations.

In early December statewide service changes went into effect, including changes to routes 40 and 42. Minor changes were made to route 40 to improve on-time performance and provide faster service. Route 42 was modified to reduce the total number of trips, serving the highest ridership, and adjustments were made to departure times to avoid duplication with route 40. No service changes are currently planned for 2019.

Figure 4. Transit Route Map



Project Status

Plan Projects

During 2018, there were three active projects in the corridor that were part of the original Plan: US 40 at SR 72, US 40 widening from Salem Church Road/Porter Road to Walther Road, and the US 40/SR 896 interchange. Figure 5 shows the status of Plan projects in the corridor as of the end of 2018. Detailed descriptions of all active projects are provided below.

US 40 at SR 72

This project includes the addition of a through lane along northbound and southbound SR 72 to provide adequate storage and taper lengths and the addition of left-turn lanes along eastbound and westbound US 40. Del Laws Road will be realigned to reduce the existing skew and align it with the future proposed access to the Fox Run Business Center; a traffic signal will also be installed at the intersection. Pedestrian and bicycle facilities will also be constructed.

Final design and right of way acquisition was completed in 2017. Advance utility relocations began in early 2018 and construction began in spring 2018. Construction is scheduled to be complete in late 2020.

US 40 Widening, Salem Church Road/Porter Road to Walther Road

The US 40 widening from Salem Church Road/Porter Road to Walther Road began concept design in 2016. In 2018, the developer for Rockwood completed widening to add a through lane along eastbound Route 40 from Rockwood Road to Glendale Boulevard.

Environmental documents and final design for the remaining segment west of Rockwood Road began in 2018. The schedule to complete final design and begin construction has not been established.

US 40 at SR 896 Intersection

Project development to address safety and congestion issues began in 2016. The project team developed concept alternatives, three of which were retained for further analysis and were presented at a public workshop held on May 1, 2018. A preferred alternative was selected in 2018. Preliminary design will begin in early 2019 and construction is scheduled to begin in summer 2022.

Glasgow Avenue Main Street Study

The Glasgow Avenue Main Street Study was completed in 2017. The study was undertaken to

develop a vision plan that will guide future transportation and land use along Glasgow Avenue in an effort to become a functional “Main Street” for the surrounding community.

The study provided several recommendations related to character districts, proposed gateway treatments, complete streets, and development. The study is now in the implementation phase when DelDOT, WILMAPCO, and New Castle County will use the design guidelines provided in the study to achieve the Main Street vision.

A copy of the study is posted on the WILMAPCO website at:

www.wilmapco.org/Glasgow/GlasgowAveMainStreetStudy.pdf

Other Projects in the Corridor

SR 71, Old Porter Road to SR 7

This project was originally identified as part of the 2008 HEP and includes some components of the Old Porter Road improvements in the Route 40 Plan. This project proposes to install a traffic signal at SR 71 and Old Porter Road; convert Church Road to one-way eastbound east of the residential driveway east of SR 71; and widen the intersection of SR 7 and SR 71 to provide separate left-turn, through and right-turn lanes on the northbound and southbound SR 7 approaches and the southbound SR 71 approach. Protected-only left-turn phasing will also be provided on all four approaches at SR 71 and SR 7.

Final design was completed in spring 2016 and construction began in summer 2017. Construction is scheduled to be complete in early 2019.

US 40 and SR 7 Pedestrian Improvements

This project was originally identified as part of the 2010 HEP due to the lack of pedestrian accommodations at US 40 and SR 7. The proposed improvements include installing signalized pedestrian crossings at the north and south legs of the intersection as well as constructing sidewalk connections along both sides of SR 7 from US 40 to south of Songsmith Drive, along the south side of US 40 from SR 7 to west of Wawa, and along the north side of US 40 from SR 7 to Governors Square Shopping Center.

Right-of-way acquisition began in late 2017, final design was completed in 2018 and construction is scheduled to begin in May 2019.

SR 72 at Old Baltimore Pike

This project was originally identified as part of the 2011 HEP. The proposed improvements include restricting eastbound left turns from Old Baltimore Pike into Royal Farms and signal modifications at SR 72. To improve eastbound left-turn capacity at SR 72, a double left-turn lane with eastbound lead/westbound lag left-turn phasing is also proposed.

Construction began in summer 2017 and was completed in 2018.

Old Baltimore Pike at Salem Church Road

This project was originally identified as part of the 2009 HEP. The proposed improvements include removing existing concrete medians and restriping Old Baltimore Pike to provide double left-turn lanes at the approaches to Salem Church Road (east) / Salem Woods Drive and Salem Church Road (west).

Final design is scheduled to be complete in early 2018. Right-of-way acquisition began in 2018 and construction could begin in spring 2019.

Construction began in 2016 and mainline US 301 was opened to traffic in January 2019.

SR 1 widening, Roth Bridge to SR 273: Planning has begun for widening (from four to six lanes) and pavement reconstruction along this segment of SR 1. Environmental studies are underway and preliminary design alternatives are being developed. Implementation will be phased over many years.

SR 72, McCoy Road to SR 71: This project proposes to widen SR 72 from two to four lanes between McCoy Road and SR 71. Multimodal improvements, including shoulders to accommodate bicycles and new sidewalks are also planned. Due to inconsistencies discovered within the existing field survey, DelDOT decided to re-survey the corridor to ensure accuracy in design. The new survey was completed in February 2017 and re-design of the corridor has begun. Utility relocation and drainage construction is expected to begin in fall 2018 and the roadway widening could begin in fall 2019.

Other Projects in the Region

As noted in previous Corridor Monitoring and Triggering Reports, future regional projects may have an impact on the Route 40 corridor. The status of these projects is summarized below.

US 301 Mainline: The alignment for a new limited-access US 301 from the Maryland state line to the south end of the Roth Bridge was approved by the Federal Highway Administration in April 2008. Final design began in late 2008 and was completed in 2014. The project was divided into seven construction contracts that will be completed simultaneously.

Figure 5. Project Status



TRIGGERING

Assessment of Monitored Conditions

Traffic congestion did not change substantially in 2018. Levels of service were acceptable for all intersections that were counted in 2018 except for Salem Church Road/Porter Road. Traffic data confirms that overall growth rates are still significantly lower than originally anticipated by the Plan.

During 2018, there were 22 new development plans submitted to New Castle County for review in the Route 40 corridor. Review of eight major developments proposed before 2018 continued this year. Among those plans, Glasgow Commons was recorded in 2018.

There were no sites located within the Route 40 Corridor on the 2018 HEP list. There was one pedestrian fatality reported in the corridor in 2018. Crash reports will be reviewed at SR 896 and Salem Church Road/Porter Road.

Comparing transit ridership numbers in 2018 with those of 2017, statewide ridership decreased over four percent while ridership in the US 40 corridor increased less than one percent.

Recommendations

General

Continue to identify funding sources to implement as many of the recommendations below as possible and restore projects that have been placed on hold.

Land development

- Continue to monitor development activity to ensure compatibility with the Plan and maintain consistent developer contributions to transportation improvements.
- Monitor developer agreements for major land developments to ensure the compatibility of developer-sponsored improvements with the Plan.

Corridor preservation

- Continue pursuing corridor preservation opportunities through the site review team process.

Highway safety

- Review crash data summary to identify any locations with significant increases in crash rates in 2018.

Transit

- Identify existing bus stops where improvements are needed – damaged shelters, need for lighting, access and sidewalk reconstruction.
- Continue to track ridership in the corridor and provide service enhancements where appropriate.
- Continue to identify opportunities for developer-funded transit improvements such as bus service expansion, bus stop improvements, transit oriented development, and innovative trail projects throughout the Route 40 Corridor.

Planning, design, and construction

- Continue construction for the US 40 / SR 72 intersection improvements
- Begin construction for the US 40 / SR 7 pedestrian safety improvements
- Continue final design for the US 40 widening between Salem Church Road/Porter Road and Walther Road
- Begin final design for the US 40 / SR 896 Grade Separated Intersection

PUBLIC INVOLVEMENT

Activities During 2018

There were no public involvement initiatives during 2018 due to funding constraints.

The project website, which was reformatted in 2018 to match the current DelDOT standard, is updated annually to provide the latest information on implementation of the Plan.

The site contains information from newsletters, updates on project planning, design, and construction, and a schedule of public meetings and workshops. The site can be accessed from the DelDOT Web site at:

<https://deldot.gov/projects/>

Activities Planned For 2019

To ensure the community is kept up to date and involved in the progress of transportation improvements in the Route 40 corridor, the project

team will continue the following communications initiatives for 2019:

Website - The Route 40 corridor project website will continue to be maintained and updated on a regular basis.

E-mail, project mailing address and telephone hotline - Residents will still be able to communicate with the project team through various channels—email, mailing address, or telephone.



Whitman, Requardt & Associates, LLP
Engineers Architects Environmental Planners Est. 1915

1013 CENTRE ROAD, SUITE 302
WILMINGTON, DELAWARE 19805
302-571-9001
WRALLP.COM